

Appl. No. 09/926,436
Amrdr. dated May 4, 2005
Reply to Office Action of Feb. 4, 2005

II. Remarks

As a preliminary matter, the Applicant thanks the Examiner for noting that a certified copy of the priority Canadian application number 2,299,824 has not yet been filed. The Applicant will be submitting a certified copy of the priority application in due course.

The Examiner rejected Claims 1-4 under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,324,648 issued to Grantges ("Grantges"). Applicant responds to this rejection as per the below.

Grantges teaches a computer system that provides authenticated access from a client computer over an insecure, public network to one of a plurality of authorized applications hosted by destination servers on a private, secure network. This authorized access is done through use of a client-side digital certificate. A firewall is disposed between the insecure, public network and the private network. A proxy server intercepts messages destined for the destination servers, and forwards the intercepted messages through the firewall to a gateway server on the private network.

In response to the rejection of claims 1 and 3, Applicant has reviewed the specification of Grantges and submits that the system 20 is designed for establishing a first secure connection 52 between the client computer 22 and the proxy server 34 (both located outside of the firewall 32), a second secure connection 54 between the proxy server and the application gateway server 38 (located behind the firewall), and a third secure connection 56 between the proxy server and the application gateway server. Applicant would like to direct the Examiner's attention to the teaching that the second secure connection is established to permit two-way real-time communication between the client computer 22 (through the proxy server) and the application gateway server for purposes of real-time bi-direction secure communication ultimately between the client computer and the

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authorized applications 24₁, 24₂, 24₃. Applicant can find no mention or even suggestion in Grantges of a polling operation for transmission of queued data across the firewall, as positively recited in amended claims 1 and 3 as further discussed below.

Applicant submits Grantges teaches that establishment and use of the first secure connection is not across the firewall. Therefore the secure connection will not be discussed further, other than to note that initiation of the secure connection is done synchronously by the client computer (see column 8 lines 16 to 28), *not* through any polling action across the firewall by the application gateway server.

Applicant submits Grantges teaches that establishment of the second secure connection is initiated by the client computer (through the proxy server), see column 6 lines 47 to 53, *not* through any polling action across the firewall by the application gateway server. The establishment of the second secure connection is done via two-way messages 72,74 (see Figure 2 and column 8 lines 53 to 60). Further, Applicant submits Grantges teaches that establishment of the third secure connection is initiated by the client computer (through the proxy server), similarly to the second secure connection, see column 7 lines 9 to 12. Applicant brings to the Examiner's attention that establishment of the second secure connection is also *not* through any polling action across the firewall by the application gateway server.

Applicant submits Grantges teaches use of the third secure connection for the purpose of the client computer first requesting and then obtaining an "options page" from the application gateway server, which provides a list of authorized applications 24₁, 24₂, 24₃ for access by the client computer. Applicant brings to the Examiner's attention that Grantges teaches initiation of the use of the third secure connection is done by request of the client computer (via the proxy server) directed across the firewall to the application gateway server, *not* through any polling action across the

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firewall by the application gateway server 38, as evidenced by the two-way messages 76, 78 of Figure 2 (see column 9 lines 19 to 25).

Applicant submits Grantges teaches use of the second secure connection for the purpose of the client computer first requesting and then obtaining access to one of the selected authorized applications, in real-time. This real-time access is described by Grantges with reference to message 80 (from the client computer and the proxy server) and message 82 (from the proxy server across the firewall to the application gateway server), see Figure 2 and column 9 lines 25 to 34. It is noted that communication between the client computer and the authorized application(s) across the firewall is described as initiated by the client computer (via the proxy server), *not* through any polling action across the firewall by the application gateway server 38. Further, Grantges describes that once the application gateway server 38 receives the message 82, the message 82 is then routed via connections 58, 60, 62 (see column 9 lines 34 to 35 and column 12 lines 1 to 5).

Further, Applicant directs the Examiner's attention to other teachings of Grantges concerning communication initiated *from* the proxy server across the firewall *to* the application gateway server, namely: column 3 lines 26 to 29 and column 4 lines 33 to 65.

Accordingly, in view of the above, Applicant submits that Grantges teaches a system 20 only for providing two-way secure real-time communication across the firewall situated between the proxy server and the application gateway server, with the ultimate message destination being the authorized applications also sitting inside the firewall. Applicant is of the opinion that Grantges neither teaches nor suggests the use of a polling server to "pull across the firewall the received data from the queue of the proxy server to the polling server", as presently claimed in amended claims 1 and 3 of the subject application. Grantges therefore does not include a *polling* server which periodically queries a proxy server for information; rather, as outlined above, in the Grantges system,

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the proxy server actively routes and forward messages through the firewall in real-time by the creation of the active two-directional ports (e.g. connections 54 and 56).

Applicant has amended claims 1 and 3 of the present application as follows:

1. A secure network resource access system for facilitating access to a network resource located behind a firewall, the secure network resource access system comprising:

a proxy server located logically outside the firewall for receiving data from a data source located outside the firewall, the proxy server having a queue for storing the received data; and

a polling server located logically behind the firewall, the polling server being configured for polling the proxy server to pull the received data across the firewall from the queue of the proxy server to the polling server; and

3. A method for facilitating secure access to a network resource located behind a firewall, the method comprising the steps of:

storing received data in a queue of a proxy server, the received data from a data source located outside the firewall; and

polling the proxy server located logically outside the firewall by a polling server located logically inside the firewall, the polling being to pull across the firewall the received data from the queue of the proxy server to the polling server.

Accordingly, and as is clearly recited in the above amended claims 1 and 3, the present invention, by contrast, includes the polling server, which periodically queries the proxy server for received data. While the Applicant is of the opinion that the nature of the proxy and polling servers of the present invention would have been clear to a person skilled in the art upon reading the Description of the invention as-filed, the Applicant has amended independent claims 1 and 3 to further clarify the nature of the invention.

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Support for these amendments can be found at page 2, paragraph [0023]:

Preferably, the proxy server 114 is located on-site at the enterprise responsible for administering the network resource 104, is provided with a network address corresponding to the enterprise, and includes a queue for receiving application data.

and at page 2, paragraph [0024]:

The polling server 116 is in communication with the enterprise server 118, and is configured to periodically poll the proxy server 114 through the firewall to determine whether application data from a network terminal 200 is waiting in the queue of the proxy server 114. The proxy server 114 is configured to transmit any queued application data to the polling server 116 in response to the poll signal from the polling server 116.

and at page page 7, paragraph [0064]:

The polling server 116 associated with the network resource 104 will poll the proxy server 114 to determine the status of the queue. Upon receipt of a polling signal from the polling server 116, the proxy server 114 transmits any queued application data from the proxy server queue, through the firewall, to the polling server 116. The polling server 116 then extracts the network address from the received application data, and transmits the application data to the appropriate server 118 or network resource 104 for processing.

Further, Applicant notes the Examiner's rejection of claims 2 and 4 of the present application but considers this rejection moot in view of the above discussed amendments and discussion of claims 1 and 3. Further, Applicant requests consideration of newly submitted claims 5 to 19.

Further, Applicant notes the prior art made of record but not relied upon.

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It is believed that the above remarks and amendments submitted herein have placed this present application in condition for allowance, and a Notice thereof is requested. Further, Applicant submits that no new matter has been introduced into the subject application by the foregoing amendments. If the Examiner has further concerns, he is encouraged to contact Applicant's undersigned agent at 416-862-4318. All correspondence should continue to be directed to listed address shown below.

Respectfully submitted,



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